

ABSTRACT

An impact-absorbing, load-limiting connection device includes a first connection structure, a second connection structure, a guiding mechanism, and at least one impact-absorbing, load-limiting sacrificial element disposed between the first and second connection structure. At least one of the first and second connection structures is moveable with respect to the other in a predetermined direction of movement corresponding to an anticipated main impact direction. The guiding mechanism is configured to guide at least one of the first and second connection structures along the direction of movement and includes at least one transverse force-absorbing guide element configured to absorb a force in a direction transverse to the direction of movement. The sacrificial element is disposed as to be uncoupled from a transverse load path of the transverse force-absorbing guide element, and is configured to be deformed and destroyed by a relative movement between the first and second connection structures upon application of predetermined maximum load. In addition, a rotary-wing aircraft, especially a helicopter, that includes at least one such connection device.